

REMARKS/ARGUMENTS

1.) Claim Amendments

The Applicants have amended claims 15, 21, 22, 24, 29, and 30. Claims 16-20, 25-28, and 32-36 have been canceled herein. Accordingly, claims 15, 21-24, and 29-31 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

2.) Claim Objections

On Page 2 of the Office Action, the Examiner objected to claims 15-19, 22, 26, 27, 32, and 33 due to informalities. The informality in claim 15 has been corrected as suggested by the Examiner. Claims 16-19 have been canceled. Claim 22 was objected to for depending from an objected to base claim (claim 15); claim 15 has been corrected. Claims 26, 27, 32, and 33 have been canceled. Therefore, the withdrawal of the claim objections is respectfully requested.

3.) Claim Rejections – 35 U.S.C. § 112

On Page 3 of the Office Action, the Examiner rejected claims 15-19, 26, and 27 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 15 was rejected for the same reason it was objected to above. Claim 15 has been corrected as suggested by the Examiner. Claims 16-19, 26, and 27 have been canceled. Therefore, the withdrawal of the § 112 rejections is respectfully requested.

4.) Claim Rejections – 35 U.S.C. § 102(b)

The Examiner rejected claims 15-17, 24-26, and 32 under 35 U.S.C. § 102(b) as being unpatentable over McCloghrie, et al. (US 6304901 B1). Claims 16, 17, 25, 26, and 32 have been canceled without prejudice. The Applicants have amended claims 15

and 24 to better distinguish the claimed invention from McCloghrie. The Examiner's consideration of the amended claims is respectfully requested.

The Applicants have amended claims 15 and 24 to incorporate the limitations of a number of previously separately dependent claims to form a new combination not previously claimed. In amended claims 15 and 24, upon receiving the downstream packet, the VLAN mapping point determines whether the downstream traffic packet is a unicast packet or a multicast packet. The claim then recites actions taken upon determining that the downstream traffic packet is a unicast packet, and upon determining that the downstream traffic packet is a multicast packet.

If the packet is a unicast packet, the VLAN mapping point extracts a destination Media Access Control (MAC) address and the VLAN tag for the second VLAN region, obtains the VLAN tag for the first VLAN region from a table in the VLAN mapping point by matching the extracted MAC address and the VLAN tag for the second VLAN region to a corresponding VLAN tag for the first VLAN region, and forwards the downstream traffic packet to the end user using the VLAN tag for the first VLAN region. If the downstream traffic packet is a multicast packet, the VLAN mapping point obtains from the table, a common VLAN tag for all end users in the first VLAN region, and forwards the downstream traffic packet to all end users in the first VLAN region using the common VLAN tag for the first VLAN region.

McCloghrie does not teach or suggest a method as recited in amended claim 15, or a VLAN mapping point as recited in claim 24, in which the VLAN mapping point maps VLAN tags between VLANs, and provides different mapping dependent upon whether a received packet is a unicast packet or a multicast packet. Therefore, the allowance of amended claims 15 and 24 is respectfully requested.

5.) Claim Rejections – 35 U.S.C. § 103(a)

The Examiner rejected claims 33 and 34 under 35 U.S.C. § 103(a) as being unpatentable over McCloghrie et al. (US 6304901 B1). Claims 33 and 34 have been canceled without prejudice.

The Examiner rejected claims 18-23, 27-31, 35, and 36 under 35 U.S.C. § 103(a) as being unpatentable over McCloghrie in view of Shankar, et al. (US 20040151120 A1). Claims 18-20, 27, 28, 35, and 36 have been canceled without prejudice. The Applicants have amended the remaining claims to better distinguish the claimed invention from McCloghrie and Shankar. The Examiner's consideration of the amended claims is respectfully requested.

Claims 21 and 29 have been rewritten in independent form to include the limitations of a number of previously separately dependent claims to form a new combination not previously claimed. In amended claims 21 and 29, upon receiving the downstream packet, the VLAN mapping point determines whether the downstream traffic packet is a unicast packet or a multicast packet. The claim then recites actions taken upon determining that the downstream traffic packet is a unicast packet, and upon determining that the downstream traffic packet is a multicast packet.

If the packet is a unicast packet, the VLAN mapping point extracts a destination MAC address and the VLAN tag for the second VLAN region, obtains the VLAN tag for the first VLAN region from a table in the VLAN mapping point by matching the extracted MAC address and the VLAN tag for the second VLAN region to a corresponding VLAN tag for the first VLAN region, and forwards the downstream traffic packet to the end user using the VLAN tag for the first VLAN region.

If the downstream traffic packet is a multicast packet, the VLAN mapping point extracts an aggregate VLAN tag from the multicast downstream packet, determines a number of entries in the table for which VLAN tags for the first VLAN region are associated with the extracted aggregate VLAN tag, and duplicates the downstream traffic packet for each of the entries in the table for which a VLAN tag for the first VLAN region is associated with the extracted aggregate VLAN tag. The VLAN Mapping Point then changes the VLAN ID in each of the duplicated downstream traffic packets to include a different one of the associated VLAN tags for the first VLAN region, and forwards the duplicated downstream traffic packets to end users using the associated VLAN tags for the first VLAN region.

The Examiner admits that McCloghrie does not disclose the use of an aggregate VLAN tag for mapping to multiple users, but asserts that Shankar does. The Examiner

cites the L2 multicast lookup table 410 for this purpose. However, there is no teaching or suggestion in Shankar of an aggregate VLAN tag associated with multiple users. In fact, Shankar specifically states on a number of occasions that VLAN tags are used to identify particular VLANs for unique customers, or to specify a unique customer. (See para. 0038, lines 13-15; para. 0040, lines 2-8). Therefore, Shankar teaches away from an aggregate VLAN tag associated with multiple users.

Thus, the combination of McCloghrie and Shankar does not establish a *prima facie* case of obviousness for amended claims 21 and 29 since the combination would not suggest the claimed invention to a person of ordinary skill in the art. Therefore, the allowance of amended claims 21 and 29 is respectfully requested.

Claims 22 and 23 depend from amended claim 21 and recite further limitations in combination with the novel and unobvious elements of claim 21. Therefore, the allowance of claims 22 and 23 is respectfully requested.

Claims 30 and 31 depend from amended claim 29 and recite further limitations in combination with the novel and unobvious elements of claim 29. Therefore, the allowance of claims 30 and 31 is respectfully requested.

6.) Prior Art Not Relied Upon

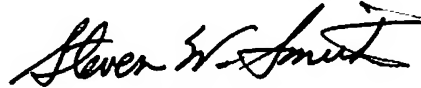
On Page 33 of the Office Action, the Examiner stated that the prior art made of record and not relied upon is considered pertinent to the Applicants' disclosure. However, the Applicants' reading of Merchant et al. (US 6,775,290) has not revealed any teaching of the Applicants' claimed invention, as recited in amended independent claims 15, 21, 24, and 29.

7.) Conclusion

In view of the foregoing remarks, the Applicants believe all of the claims currently pending in the Application to be in condition for allowance. The Applicants, therefore, respectfully request that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 15, 21-24, and 29-31.

The Applicants request a telephonic interview if the Examiner has any questions or requires any additional information that would expedite the prosecution of the Application.

Respectfully submitted,



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Date: SEP. 25, 2009

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